[54] METHOD FOR DETERMINING MOTION COMPENSATION

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[56] References Cited

U.S. PATENT DOCUMENTS

4,691,230	9/1987	Kaneko et al.	348/699
4,862,266	8/1989	Gillard	348/699
4,864,294	9/1989	Gillard	
4,989,089	1/1991	Chantelou et al.	

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

0395271A2 10/1990 European Pat. Off. .

0395440A2 10/1990 European Pat. Off. .
0447068A2 9/1991 European Pat. Off. .
0484140A2 5/1992 European Pat. Off. .

OTHER PUBLICATIONS

A. Puri, et al, "Video Coding with Motion–Compensated Interpolation for CD–ROM Applications", Signal Processing. Image Communication, vol. 2, No. 2, pp. 127–144, Aug. 1990.

K. Kinuhata, et al, "Universal Digital TV Codec —Unicodec", 7th International Conference on Digital Satellite Communications, May 1986, pp. 281–288.

(List continued on next page.)

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[57] ABSTRACT

A method for predicting motion compensation for determining of an input image based on a motion vector of the input image from this input image to a reference image which has been sampled at a first set time, and the method includes calculating a motion vector of the input image based on a move, at a second set time, of a block unit which is a part of the input image and consists of a plurality of pixels, and calculating a motion vector of the reference image based on a move, at the first set time, of a block unit which is a part of the reference image and consists of a plurality of pixels. Move compensation of the input image is calculated both from the motion vector of the input image and from the motion vector of the reference image, to thereby realize a method for determining motion compensation with high precision.

3 Claims, 6 Drawing Sheets